

REMARKS

Reconsideration of the above identified application in view of the preceding amendments and the following remarks is respectfully requested.

First, the Applicant and its attorneys wish to thank the Examiner for allowing Applicant's attorney Mr. Peter Hammond to conduct a telephone interview with the Examiner on Thursday, March 23, 2006. The following is a summary of this telephone interview with the Examiner:

INTERVIEW SUMMARY

Prior to the telephone interview with the Examiner on March 23rd, Applicant's attorney forwarded to the Examiner by fax proposals for amending independent claims 1 and 11 of the application. Proposed amended claim 1 included the subject matter of existing claims 2 and 3 while proposed claim 11 included the subject matter of existing claim 12. Mr. Hammond explained why, in his submission, the proposed amended claims clearly and patentably distinguished over the applied references to Zankl and to Hajdukiewicz (U.S. Patent Nos. 4,164,290 and 5,971,903). The arguments submitted to the Examiner during the course of this interview are summarized below in the present response.

Although the Examiner Mr. Gates did not commit himself to allowing the claims of this application if claims 1 to 11 were amended as proposed, he did recommend that a response be submitted along the lines of the present response and indicated that he would give the amended claims serious consideration.

CONTINUATION OF REMARKS

As indicated, claim 1 has now been amended to include the subject matter of former dependent claims 2 and 3 which have now been cancelled. The subsequent claims have been renumbered accordingly. Independent claim 11 has been amended to incorporate the subject matter of former claim 12, a claim which has now been cancelled. Former independent claim 16 which is directed to a support apparatus for a plurality of tool members has now been rewritten as a dependent claim which is dependent upon amended claim 1. A minor

amendment has been made to claim 17 in order to delete the introduction of the elongate rod feature, a feature now included in claim 1 on which claim 17 depends indirectly. Similarly former independent claim 20 has been rewritten as a dependent claim which depends on claim 1. Accordingly, it is submitted that if the Examiner now finds claim 1 to be in condition for allowance, then rewritten claims 16 and 20 and the claims dependent thereon are allowable for the same reasons.

Turning now to the initial rejection of a number of claims including claims 1 to 3 and claim 20 on the grounds of anticipation in view of the Zankl Patent, it is respectfully submitted that claim 1 does in fact patentably distinguish over the Zankl reference by reciting the following features:

- (1) an elongate support post adapted for rotation about a longitudinal axis of said post (in the reference, the tool changer drum 40 on which the pivoting tool changer arms 46 are mounted is circular and generally has the shape of a substantially flat disk);
- (2) in the working position of each tool member, the tool member must extend outwardly in a substantially radial direction from a longitudinal axis of the support post (in the reference, if the tool changer arm is considered as the tool member since it is the member connected to the drum, in its working position it extends in a direction parallel to the central axis of the drum, this horizontal axis being indicated at 42 in Figure 7);
- (3) the actuating member for pivoting any one of the tool members must be an elongate rod that is non-rotatably mounted in a central passageway extending along the longitudinal axis of the post (in the reference, the plunger 64 shown in Figure 7 which is used to move a rack in order to pivot a respective one of the tool changer arms is not located in any central passageway of the drum 40 and indeed it is spaced radially away from the central axis 42 of the drum as shown in Figure 7 of the patent).

As explained to the Examiner during the telephone interview, the combination of support post assembly and tool members claimed in claim 1 can be used on automated machinery designed to manufacture plastic window frames. A variety

of tools can be required to complete the manufacturing process and to carry out the various operations such as weld bead cleaning and the combination of the present invention enables any one of a variety of tool members to be quickly presented for use in the manufacturing process. Moreover, by having the tool members arranged on an elongate post, the post and the tool members can be quickly manipulated about and within the window frame in order to carry out the various required operations and the combination can be brought into tight 90° corners of the frame with relative ease.

In such a manufacturing environment, it is quite advantageous to have the actuating member in the form of an elongate rod mounted along a central passageway of the post. As explained to the Examiner by locating the actuating member in this manner, it does not interfere with the manufacturing process, including the operation of the selected tool members. This is not the case with the arrangement in the Zankl Patent which requires the use of an exposed, projecting plunger 64 that is attached to a rack 58 which in turn operates a pinion gear 56 located at one end of the tool changer arm 46 (see Figure 9). In addition, in order to operate the plunger 64, there must be a separately mounted pneumatic actuator 96 which operates a plunger 98 and the actuator 96 is quite large and not far from the rim of the drum 40.

Accordingly, for all of these reasons it is submitted that the combination of claim 1 represents a significant advance in the art of machine tools which is neither anticipated by nor rendered obvious by the Zankl reference when considered alone.

In the alternative, the Examiner also rejected claims 1 to 3, claim 20 and other claims on the grounds of obviousness in view of the combination of Zankl and the '903 Patent. However, as explained during the telephone interview, it is submitted that the '903 Patent does not in fact overcome the aforementioned deficiencies in the teachings of Zankl although it does show an elongate post 12.

The post 12 in the '903 Patent is simply a support post mounted on a fixed plate 10 and which is used to mount two or more tools such as probe heads 34, 38. There is no indication or suggestion in this reference that the post 12 should be made rotatable and indeed there is no need to make this post rotatable since it is simply used to hang tools or probes on it so that they will be available for pick up

by an articulating probe head 40 shown in Figure 2, this probe head being part of a coordinate positioning machine (the nature of which is explained in the first paragraph of the patent). The articulating probe head 40 is able to pivot about at least two different axes so that it is able to manoeuvre into position to pick up the touch probe tool. The touch probe tool is then moved by the arm of the machine to another position (not shown) to enable the machine to perform a cutting or measuring operation. There is no reason that one skilled in this art would look at the teachings of the '903 Patent to overcome the deficiencies of Zankl as outlined above, particularly since the Zankl reference requires the use of a relatively flat rotating drum, with a number of tool changing arms mounted thereon. Zankl does not in fact employ an elongate post.

Turning now to the rejection of claims 11 to 13 and 16 on the grounds of obviousness in view of either Zankl taken alone or in view of the combination of Zankl and Hajdukiewicz, it is respectfully submitted that amended claim 11 is allowable over this prior art for substantially the same reasons as stated for claim 1. This claim 11 recites similar distinguishing features. In particular, claim 11 recites the following features that are not taught by or suggested by the Zankl Patent when considered alone:

- (1) an elongate support post adapted to rotation above a longitudinal axis of said post, which extends vertically during use of said post (in the Zankl reference, the relatively flat drum 40 has a central axis but this axis extends horizontally as clearly shown in Figures 6 and 7);
- (2) when the tool member is pivoted to its working position, a selected tool member must extend substantially radially outwardly from a longitudinal axis of the post;
- (3) a linearly movable actuating member in the form of an elongate rod which extends through a central axial passageway formed in the post, this rod being linearly movable in the passageway;
- (4) a power drive system operatively connected to a lower section of said support post (in the reference the drum 40 is rotated by a motor and clutch 89 which drive a pinion 88 to rotate a ring gear on one vertically extending side of the drum - see Figure 7).

In view of these several important differences, the importance of which

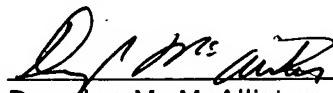
has been outlined above, it is respectfully submitted that one skilled in the art would not find it obvious to construct the combination of claim 11 based simply on the teachings of the Zankl Patent.

Moreover, for the reasons explained above, the deficiencies in the Zankl Patent are not overcome by the teachings of a fixed, elongate post 12 as shown in the '903 Patent. Clearly there is nothing which would lead one skilled in the art to replace a relatively flat, rotating drum such as that used in the Zankl with a fixed elongate post 12. Indeed, it would appear that the teachings of the '903 Patent are inconsistent with and incompatible with the requirements of the Zankl machine which must have a rotating, flat drum structure in order to rotate one of a plurality of toolholders from its storage position into a working position.

With respect to the other references relied upon by the Examiner including the Von Haas reference, the Yasuda reference, the Tokura reference, and the Noa reference, it is noted that all of these references were cited by the Examiner in a previous Office Action and Applicant's attorney reiterates his submissions with respect to these references as set out in the previous response. It is submitted that none of these additional references overcomes the deficiencies in the primary references discussed above. Therefore the independent claims now in this application distinguish over these secondary references as well. It is respectfully submitted that the dependent claims which have been rejected on the basis of one or more of these references are allowable over this prior art for the same reasons as indicated above for claims 1 and 11.

To conclude, it is respectfully submitted that all of the claims now remaining in this application are in condition for allowance and such action is earnestly solicited.

Respectfully submitted,



Douglas M. McAllister
Reg. No. 37,886
Lipsitz & McAllister, LLP
755 Main Street, Bldg. 8
Monroe, CT 06468 USA

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(203) 459-0200